

Amendments To The Specification

Paragraph beginning at page 6 line 7 has been amended as follows:

The fin actuator section **10** has a means **100** operatively configured for rotating a power shaft (means for rotating) **100**, preferably a reversible electric motor, and a power shaft (not shown), that is the motor's output shaft. The means for rotating **100** is mounted in an actuator housing **200**, thereby constraining the rotating means from free movement. The power shaft is fixed to a threaded lead screw **120**, preferably by means of a set screw coupler **110**. The lead screw **120** has a lead nut **130** that traverses along the lead screw in response to the rotation of the lead screw **120**. The lead screw **120** is lubricated to enable the lead nut **130** to move smoothly. By rotating the lead screw **120** in forward and reverse directions the lead nut **130** moves in opposite linear directions along the length of the lead screw **120**, thus converting the rotational movement of the power shaft to linear movement. The lead nut **130** is operatively coupled to a crank arm **150** having slots **154** in such a way as to allow it freedom of movement without substantially contributing to the total backlash. Preferably the lead nut **130** includes fixed pins **140** on each side (bottom pin not shown) which slide into the slots **154** of the crank arm **150**. The pins **140** serve to both restrain the lead nut **130** in the crank arm **150**, and as the structural component used to transfer the torque to the crank arm **150**. The crank arm **150** turns in relation to the movement of the lead nut **130**, thereby converting linear movement to the rotational movement of the fin shaft **160**. The crank arm **150** is rigidly attached to the fin shaft **160** thereby the fin shaft **160** is rotated with the rotation of the crank arm **150**, adjusting the fin (not shown) on the outside of the missile according to the guidance system.

The Abstract beginning at page 15 line 2 has been amended as follows:

~~The present invention relates to a novel~~ A fin actuator for a portable missile and a method of using the same. One aspect of the present invention includes a fin or wing actuator that meets very strict criteria to fit within a compact, portable missile while substantially limiting backlash. Another aspect of the present invention is a method of fin actuation in a portable missile while substantially limiting backlash.

Paragraph beginning at page 3 line 14 has been amended as follows:

~~An~~ In an embodiment of the present invention a fin actuator(s) in a portable missile that substantially limits backlash includes a means for rotating a power shaft operatively configured to rotate the power shaft in a forward direction and a reverse direction; a means for converting the rotational movement of the power shaft to linear movement, including a lead screw fixedly coupled to the power shaft with a lead nut threadingly engaged and moving linearly along the lead screw in relation to the direction of rotation of the power shaft; and a means for converting the linear movement of the lead nut to rotational movement of a fin shaft, including the lead nut operatively coupled to a crank arm fixedly coupled to the fin shaft, effecting the rotation of the fin shaft according to the linear movement of the lead nut.